Panasonic

Operating Instructions

Home Theater Audio System

Model No. **SC-HT65**

VIERA Link

HDMI™ HIGH-DEFINITION MULTIMEDIA INTERFACE

GN

RQTV0225-B

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Dear customer

Thank you for purchasing this product.
Please read these instructions carefully before connecting, operating or adjusting this product.
Please keep this manual for future reference.

System	SC-HT65
AV Control Receiver	SA-HT65
Front speakers	SB-HF550
Surround speakers	SB-HS550
Center speaker	SB-HC550
Subwoofer	SB-HW550

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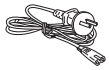
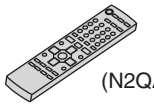
Supplied accessories

Please check and identify the supplied accessories.

- ☐ 1 AC mains lead 
- ☐ 1 FM indoor antenna
- ☐ 1 AM loop antenna
- ☐ 1 Remote control  (N2QAYB000200)
- ☐ 2 Batteries
- ☐ 1 Calibration microphone
- ☐ Speaker cables
  1 x short cable
  2 x long cables
- ☐ 8 Screws
- ☐ 2 Stand bases
- ☐ 2 Speaker stands with short cables
- ☐ 1 Speaker sticker sheet

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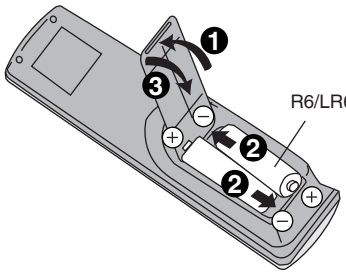
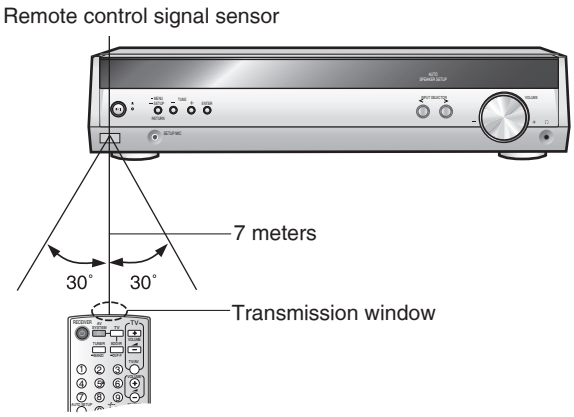
The remote control



- Insert so the poles (+ and –) match those in the remote control.
- Do not use rechargeable type batteries.

Use

Aim at the sensor, avoiding obstacles, at a maximum range of 7 m directly in front of the unit.



Note

- Keep the transmission window and the unit's sensor free from dust.
- Operation can be affected by strong light sources, such as direct sunlight, and the glass doors on cabinets.

Control guide

Remote control

This page describes the buttons used to control this unit.
See the guide at pages 21 and 22 for the buttons that control other units.

1 [⏻, RECEIVER]
Standby/on button.

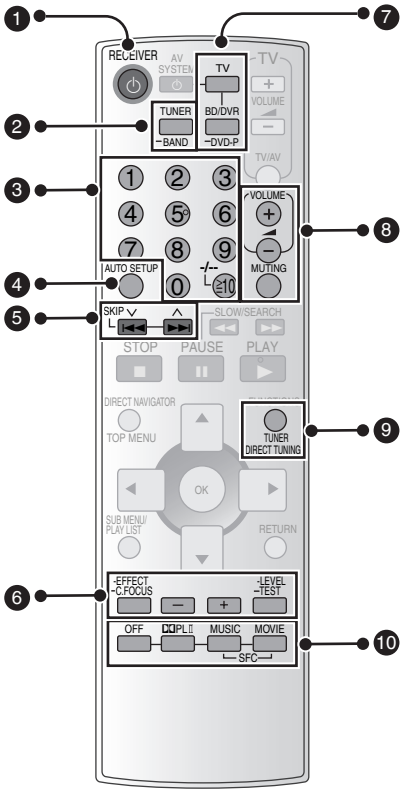
2 [TUNER, –BAND]
- For switching the remote control to TUNER mode and selecting TUNER. After selecting TUNER, press and hold to switch between FM and AM.

3 [1, 2, 3, 4, 5, 6, 7, 8, 9, 0]
To enter radio frequencies and channels.
[≧10, -/--]
To enter two digit channels.

4 [AUTO SETUP]
For auto speaker setup.

5 [⏮, ∨, ⏭, ∧, SKIP]
For selecting preset radio channels.

5 [-EFFECT, –C.FOCUS]
Use when adjusting Dolby Pro Logic II effects.
Press and hold to select center focus mode.
[-, +]
First select [-EFFECT] or [-LEVEL, –TEST], then press [-] or [+] to adjust.
[-LEVEL, –TEST]
Use when adjusting speaker level.
Press and hold to start the speaker test signal.



[TV] [BD/DVR, DVD-P] 7
Input mode and remote control mode buttons.

[+, -, VOLUME] 8
To adjust the volume.
[MUTING]
To mute the volume.

[TUNER DIRECT TUNING] 9
To enable selection of radio stations by frequency.

[OFF] 10
To cancel Dolby Pro Logic II and SFC.
[PL II]
For selecting a Dolby Pro Logic II mode: MOVIE, MUSIC or PANORAMA.
[MUSIC]
For selecting SFC modes: LIVE, POP/ROCK, VOCAL, JAZZ, DANCE or PARTY.
[MOVIE]
For selecting SFC modes: DRAMA, ACTION, SPORTS, MUSICAL, GAME or MONO.

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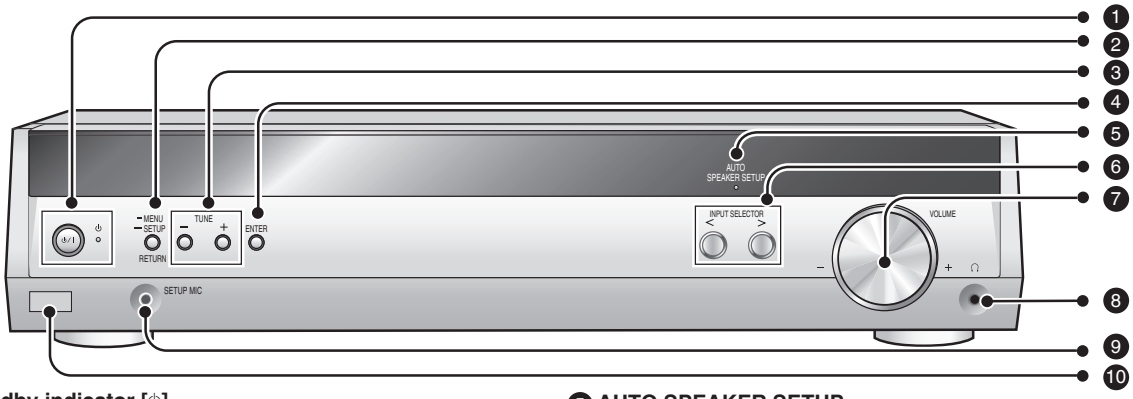
Main unit



1 Standby indicator [⏻]
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.
Standby/on switch [⏻/I]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

2 [-MENU, –SETUP, RETURN]
- For entering menus to make various settings.
- For returning to previous menus.

3 [TUNE, −, +]
For tuning the radio and selecting menu or setup items.

4 [ENTER]
Used during menu or setup operations.

5 AUTO SPEAKER SETUP
Flashes during Auto Speaker Setup. Lights when the setup finishes.

6 [INPUT SELECTOR, <, >]
For selecting input.

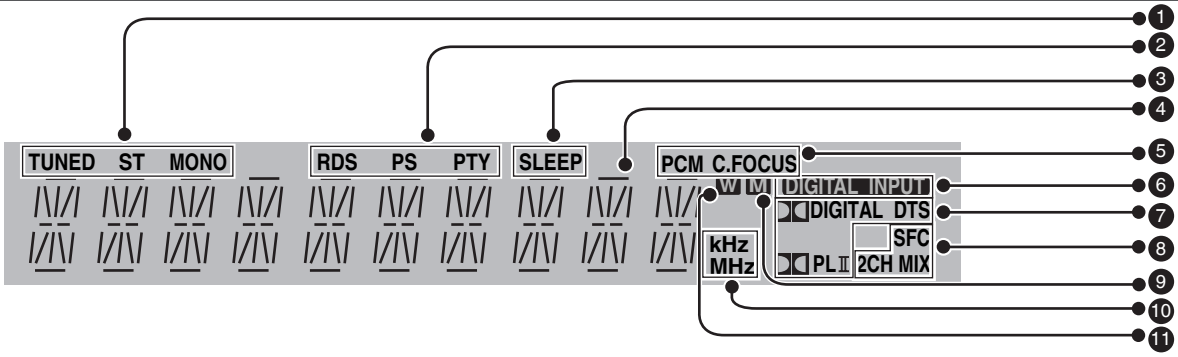
7 [VOLUME]
Volume control.

8 [∩] Headphone jack
Plug type: 3.5 mm stereo
- Sound does not come from the speakers if you connect headphones.
- Avoid listening for prolonged periods of time to prevent hearing damage.

9 SETUP MIC jack
For calibration microphone

10 Remote control signal sensor

Display



1 [TUNED, ST, MONO]
Radio indicators
TUNED: A station is tuned
ST: A stereo FM broadcast is tuned
MONO: You have switched to monaural mode to improve reception

2 [RDS, PS, PTY]
Shows the current RDS display mode.

3 [SLEEP]
Sleep timer indicator.

4 General display
Shows the input mode, radio frequency and other general information.

5 [PCM, C.FOCUS]
PCM: Lights when the PCMFIX mode is set
C.FOCUS: Appears when you are using Center Focus

6 [DIGITAL INPUT]
Lights when input is digital.

7 [DIGITAL, DTS, PL II]
Lights to indicate the source's input signal and decoding format used.
DIGITAL: Dolby Digital sources
DTS: DTS sources
PL II: Dolby Pro Logic II decoder is being used

8 [SFC, 2CH MIX]
SFC: Appears when you are using an SFC mode
2CH MIX: Appears when you are listening to a multi-channel source with headphones

9 [M]
Flashes or lights during presetting.

10 [kHz, MHz]
Frequency unit indicators
kHz: AM, or PCM sampling frequency
MHz: FM

11 [W]
Lights when you are using the digital transceiver (➡ page 7).
Flashes when there is no link between the main unit and the wireless system
(For details, refer to the operating instructions for SH-FX65).

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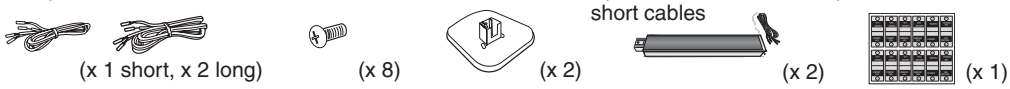
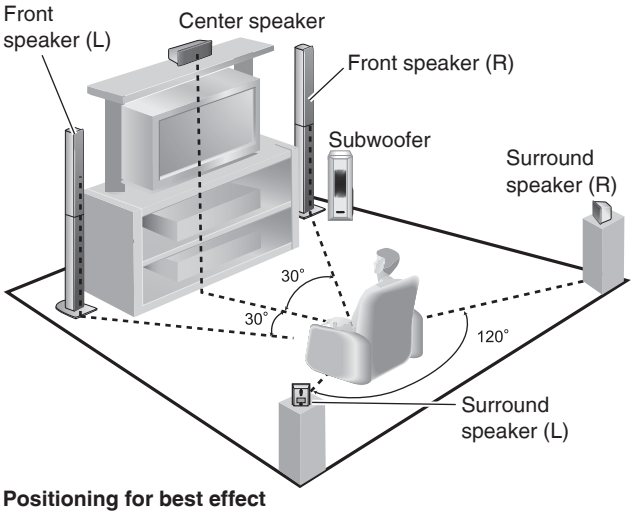
STEP 1 Speaker setup

Supplied accessories



Placement of speakers



Positioning for best effect

How you set up your speakers can affect the bass and the sound field.

Note the following points.

- Place speakers on flat secure bases.
- Placing speakers too close to floors, walls, and corners can result in excessive bass. Cover walls and windows with a thick curtain.

Place the front, center, and surround speakers at approximately the same distance from the seating position.

Auto Speaker Setup compensates for any differences (➡ pages 11 to 12).

The angles in the diagram are approximate.

Front speakers (left, right)

Place on the left and right of the TV at seated ear height so that there is good coherency between the picture and sound.

Center speaker

Place underneath or above the center of the TV. Aim the speaker at the seating area.

Surround speakers (left, right)

Place on the side of or slightly behind the seating area, higher than ear level.

Subwoofer

The subwoofer can be placed in any position as long as it is at a reasonable distance from the TV.

Note that some experimentation can yield the smoothest low frequency performance. Placement near a corner can increase the apparent output level, but can result in unnatural bass.

Note

Keep your speakers at least 10 mm away from the system for proper ventilation.

If irregular colouring occurs on your television

The supplied speakers are designed to be used close to a television, but the picture may be affected with some televisions and setup combinations.

If this occurs, turn the television off for about 30 minutes.

The television's demagnetising function should correct the problem. If it persists, move the speakers further away from the television.

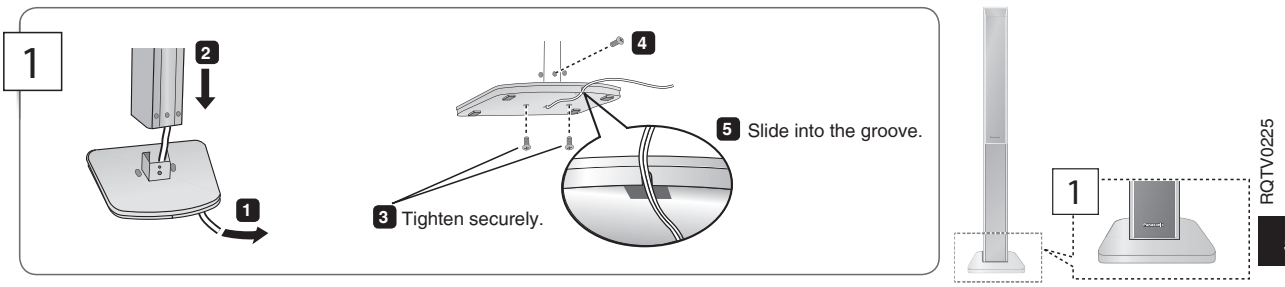
Caution

- **The main unit and supplied speakers are only to be used as indicated in this manual. Failure to do so may lead to damage to the receiver and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage occurs or if a sudden change in performance is apparent.**
- **Do not attempt to attach these speakers to walls using methods other than those described in this manual.**

Front speaker assembly

Preparation

- To prevent damage or scratches, lay down a soft cloth and perform assembly on it.
- For assembly, use a Phillips-head screwdriver.
- There is no difference between the right and left speakers and stands.
- For optional wall mount (➡ page 7).



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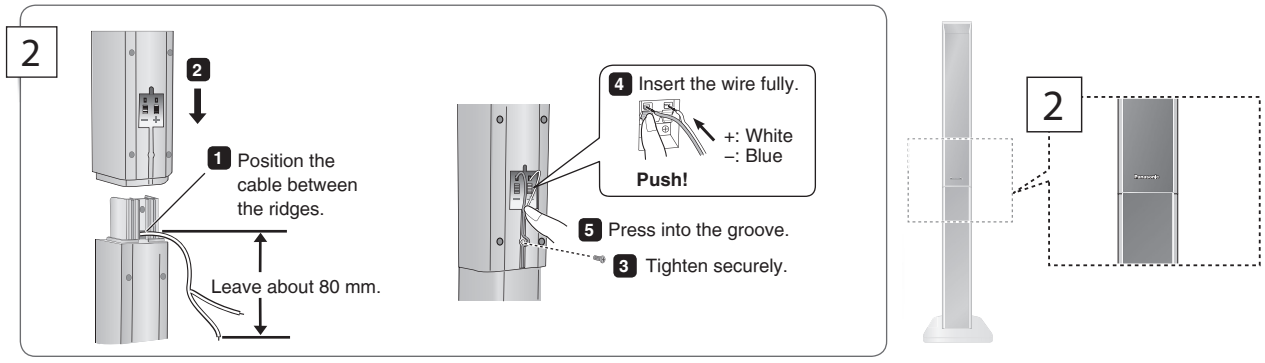
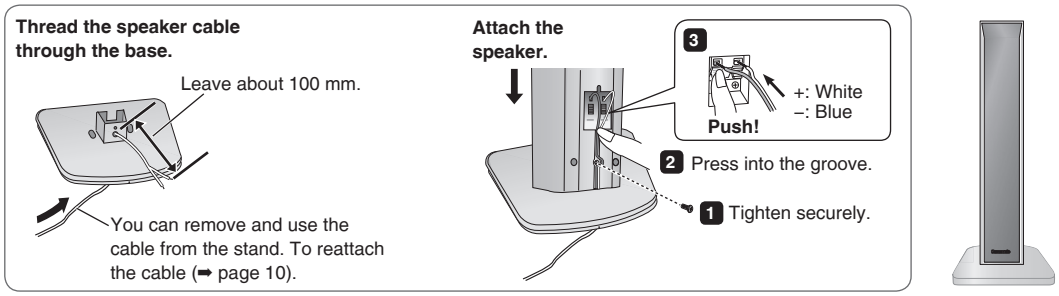
STEP 1 Speaker setup

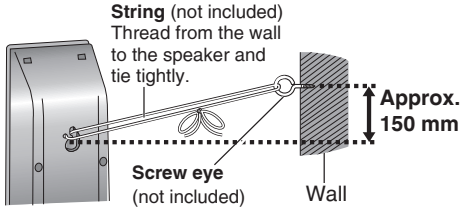


■ Speaker assembly option


Thread the speaker cable through the base.
Leave about 100 mm.
You can remove and use the cable from the stand. To reattach the cable (➡ page 10).
Attach the speaker.
3
+: White
–: Blue
Push!
2 Press into the groove.
1 Tighten securely.

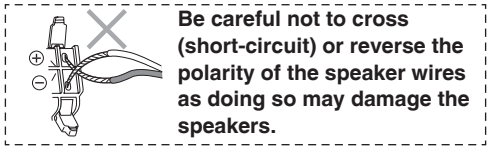
Preventing the speakers from falling over

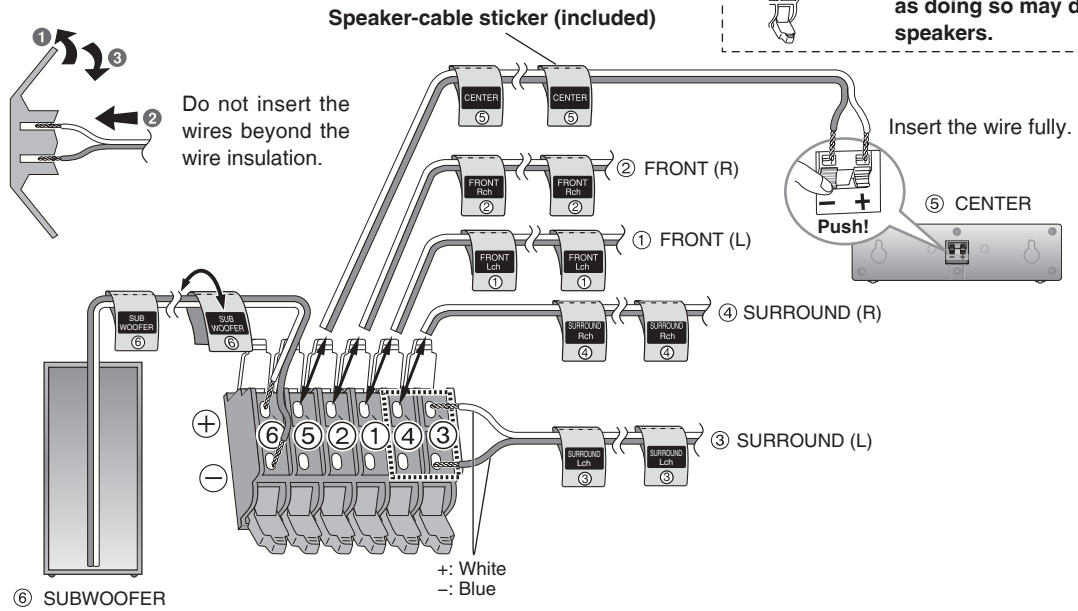
- Obtain the screws appropriate to the walls and pillars to which they are going to be fastened.
- Consult with a qualified housing contractor concerning the appropriate procedure when attaching to a concrete wall or a surface that may not have strong enough support. Improper attachment may result in damage to the wall or speakers.



Connect the speakers to the receiver

Attach the speaker-cable stickers to make connection easier.





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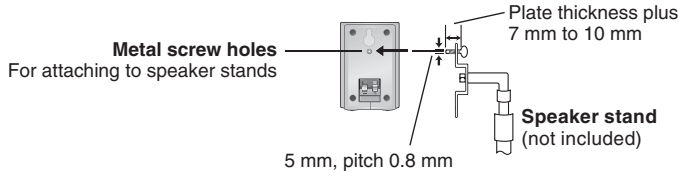
Other speaker setup options

■ Fitting optional speaker stands (not included)

Ensure the stands meet these conditions before purchasing them.
Note the diameter and length of the screws and the distance between screws as shown in the diagram.

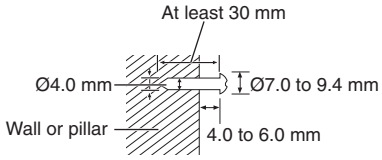
- The stands must be able to support over 10 kg.
- The stands must be stable even if the speakers are in a high position.



■ Attaching to a wall

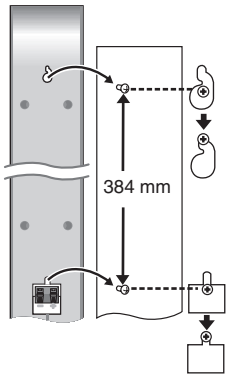
You can attach the surround, center and front speakers to a wall.

1 Drive the screw (not included) into the wall

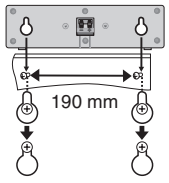


2 Fit the speaker securely onto the screw(s) with the hole(s).

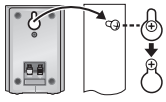
Front speakers
Attach to a wall without the base and stand.



Center speaker



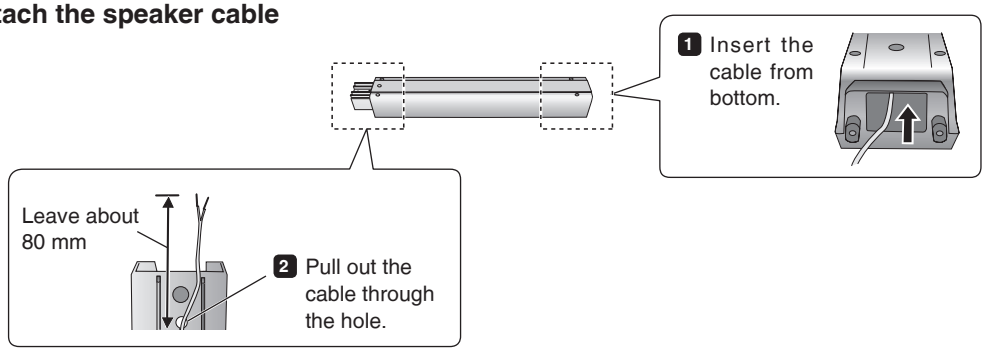
Surround speaker



Note

The wall or pillar on which the speakers are to be attached should be capable of supporting 10 kg per screw. Consult a qualified building contractor when attaching the speakers to a wall. Improper attachment may result in damage to the wall and speakers.

■ Reattach the speaker cable



Wireless system connection

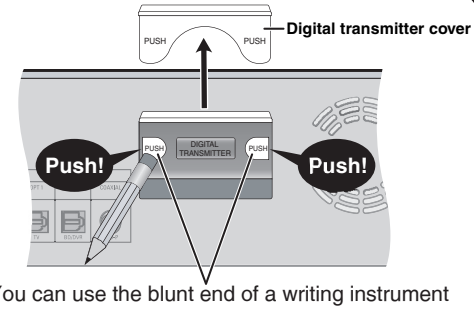
Set your sound free with Panasonic's wireless receiver and speaker systems

Attach the SH-FX65 digital transceiver for wireless surround sound.
You can also connect your portable audio equipment to the wireless system.
For details, refer to the operating instructions for SH-FX65.

Note

Remove the digital transmitter cover before installing any optional Panasonic wireless accessory.

- Replace the cover when the digital transmitter is not in use.



You can use the blunt end of a writing instrument to push here until the cover pops out.

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Home theater connections

HDMI and VIERA Link "HDAVI Control™"

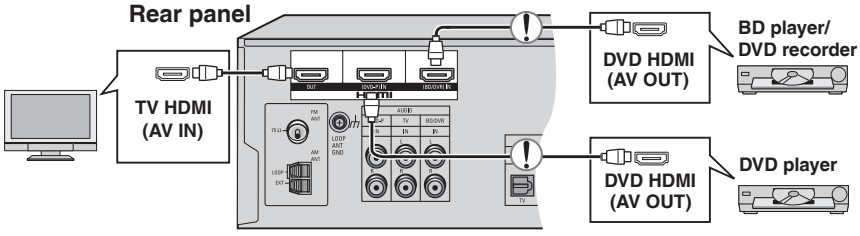
High-quality audio and video simply with HDMI connection

- The HDMI (High Definition Multimedia Interface) connection means you only need one cable to transmit digital audio and video between two pieces of equipment.

HDMI Cable (Use a Panasonic HDMI cable for best results.)

[Recommended part number: RP-CDHG15 (1.5 m), RP-CDHG30 (3.0 m), RP-CDHG50 (5.0 m) etc.]

- Use only HDMI cables that have the HDMI logo (as shown on the cover).

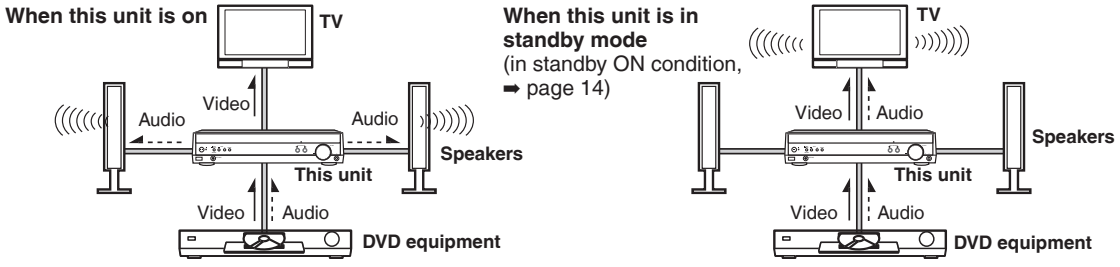


Note

Connect only DVD equipment to the HDMI input terminal of the unit. Connecting other equipment may prevent the output of sounds or show distorted pictures.

Audio and video signal flow when you have used HDMI connections

The audio and video signals from DVD equipment pass through to the television even if this unit is set to standby.



For your reference

- Audio signals from HDMI connection takes priority to digital terminal connections (➡ page 9).
- This unit's HDMI can carry video signals up to 1125p (1080p) (even when this unit is in standby mode).
  1125p: a progressive (non-interlace) scanning system that sends 1,125 scan lines every 1/60 second.

Using the VIERA Link "HDAVI Control"

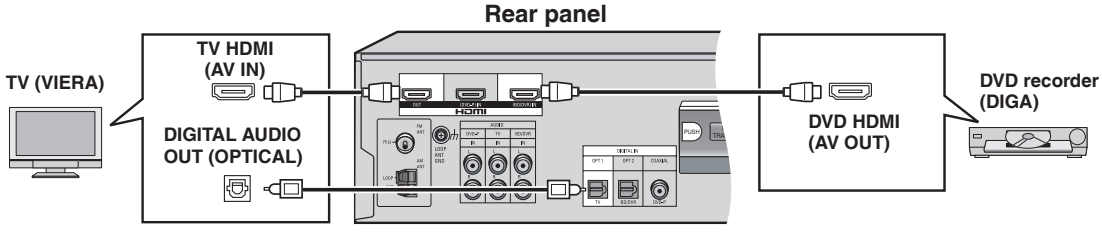
VIERA Link "HDAVI Control"

This convenient feature links control of your receiver and your other Panasonic home theater equipment. VIERA televisions and DIGA DVD recorders connected with an HDMI cable can be controlled in this way. For details, refer to the operating instructions of your other equipment.

- VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.

Preparation

1. **Connect your other Panasonic home theater equipment (VIERA Link "HDAVI Control" compatible VIERA television or DIGA DVD recorder) with an HDMI cable (above).**
2. **Read your television's operating instructions and make the settings necessary to activate the VIERA Link "HDAVI Control".**
3. **Switch on all your equipment, then switch your television off then on again and check that images from DIGA appear correctly.** (Do this whenever you change connections or settings.)



- To take advantage of the multi-channel sounds now available with digital television, use a digital connection if your TV has a digital output terminal.
- To turn off VIERA Link "HDAVI Control", "HDMI settings", ➡ page 14.

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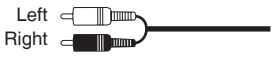
- Turn off all components before making any connections.
- Peripheral equipment and cables sold separately unless otherwise indicated.
- To connect equipment, refer to the appropriate operating instructions.

Other accessories

Stereo phono cable



Optical fibre cable

Coaxial cable

Notes on digital input

This unit can decode the following signals:

- **Dolby Digital, DTS**
- **PCM, including PCM with sampling frequencies of 96 kHz or 88.2 kHz**

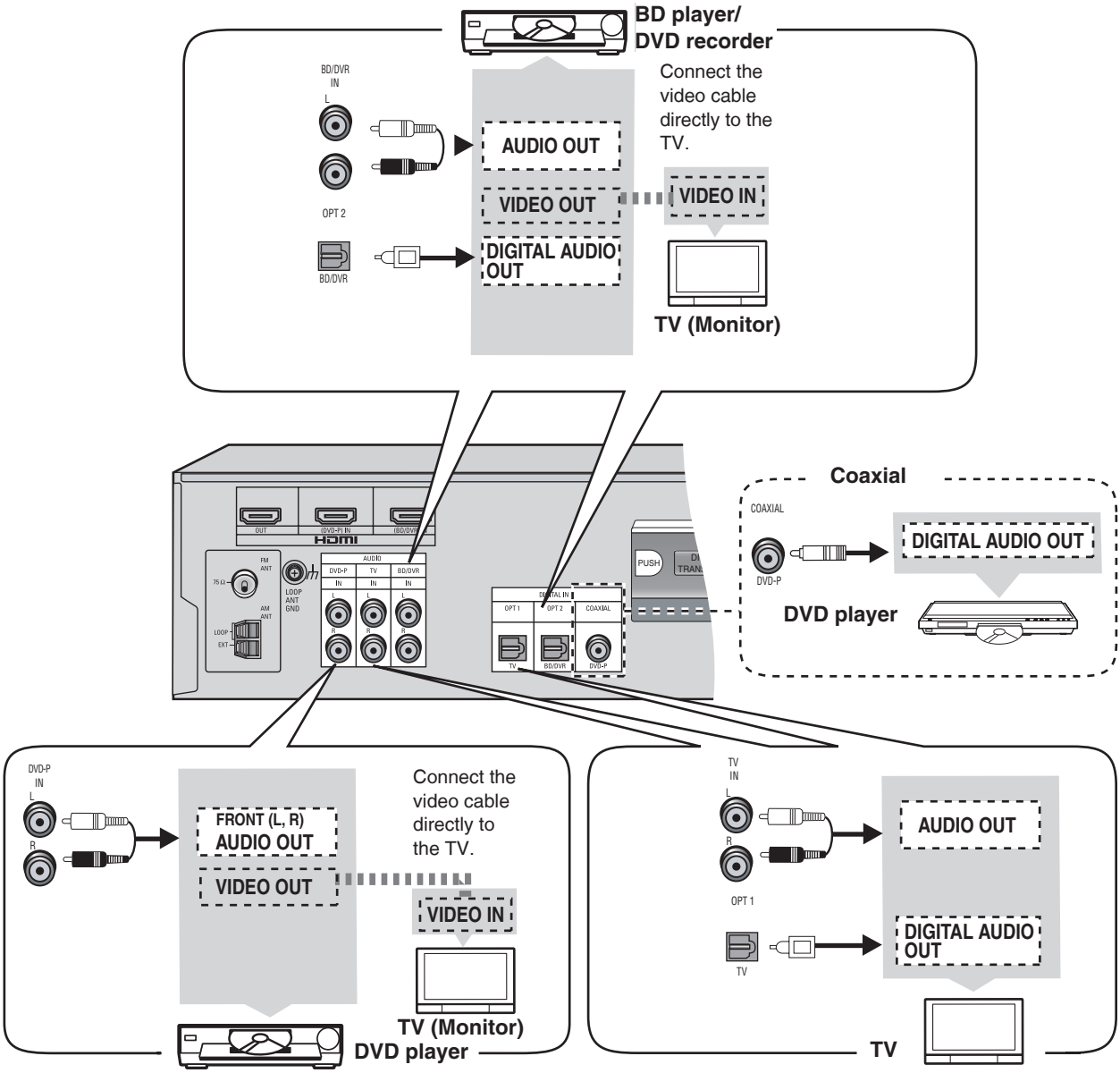
It cannot decode:

- **Other digital signals, such as MPEG**
- **Dolby Digital RF signals from a laser disc player**

Note

- Use digital connection to enjoy Dolby Digital or DTS.
- Do not bend the optical fibre cable.

TV, BD player/DVD recorder and DVD player



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STEP 3 Antenna and AC mains supply connections

Supplied accessories

- AC mains lead (x 1)
- FM indoor antenna (x 1)
- AM loop antenna (x 1)

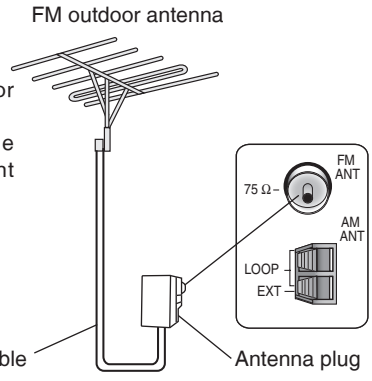
FM indoor antenna (included)

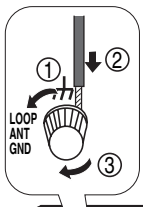
Adhesive tape
Fix the end of the antenna where reception is best.

For best reception

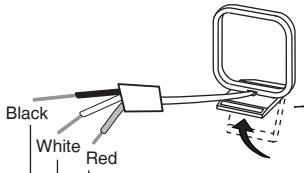
FM outdoor antenna

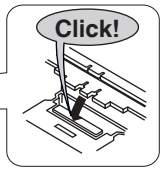
- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.



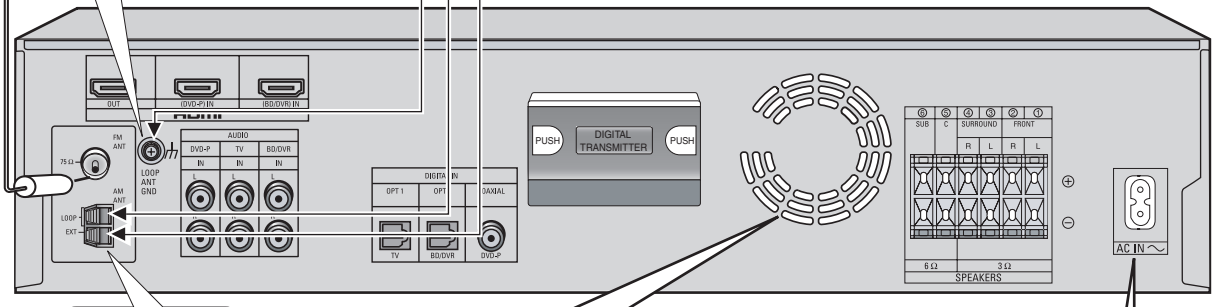


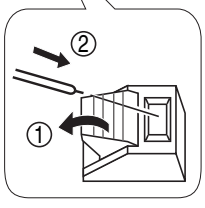
AM loop antenna



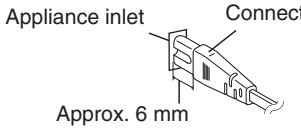


Keep the antenna cord away from DVD players and other cords.





The cooling fan operates at high power output levels only.



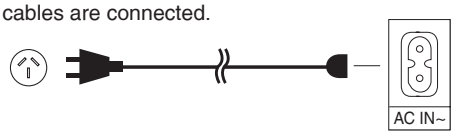
Insertion of connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing. However there is no problem using the unit.

AC mains lead (included)

Connect this cord after all other cables are connected.

Household AC mains socket
(AC 230-240 V/50 Hz)



Conserving power

The unit consumes 1 W even when it is turned off with [⏻/I]. To save power when the unit is not to be used for a long time, unplug it from the household AC mains socket. You will need to reset some memory items after plugging in the unit.

Note

- The included AC mains lead is for use with this unit only. Do not use it with other equipment.
- Do not use an AC mains lead from any other type of equipment with this unit.

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STEP 4 Auto speaker setup

- Turn off all components before making any connections.
- Peripheral equipment and cables sold separately unless otherwise indicated.
- To connect equipment, refer to the appropriate operating instructions.

Auto speaker setup allows you to achieve a satisfactory listening environment easily with the use of the supplied calibration microphone as a detector of sound signals. The unit will first perform automatic speaker detection, then checks and adjusts the following settings.

DETECTION	• Checks which speakers you have connected. For manual setup, “Speaker size”, ➡ page 13.
DISTANCE	• Checks the distance of each speaker from the listening position and adjusts the timing of each channel. For manual setup, “Distance”, ➡ page 13.
SIZE	• Calibrates based on small speaker configuration.
FREQUENCY	• Sets the appropriate low frequency crossover for each channel according to the speaker size. For manual setup, “Filter”, ➡ page 12. • The setting is based on the speaker bass reproduction range. • Also checks on ***“Level”*** setting to adjust for each speaker.
LEVEL	• Makes any further corrections to the volume of each speaker and also to the frequency response.

Loud test tones are output from the speakers during setup, so keep children out of the room.

Before setup

- Conduct the auto speaker setup in a quiet environment. A noisy background will give unsatisfactory results.
- Put the subwoofer in position, switch it on, and sets its volume to the level you would normally use.

Process for auto speaker setup

1 Turn on the unit.

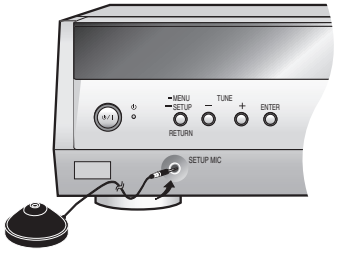
Press **.**

- The standby indicator goes off when you turn on the unit.

2 Connect the calibration microphone to the [SETUP MIC] jack on the front panel.

Note

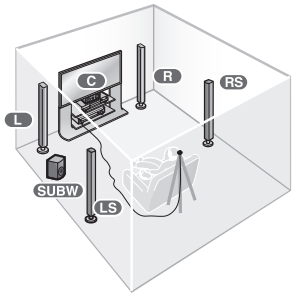
The calibration microphone is sensitive to heat. Keep it away from direct sunlight and do not place it on top of the unit.



Calibration microphone (included)

3 Placing of calibration microphone.

- Place on a flat surface at the seating area.
- Set calibration microphone position at your ear height.
- Use a tripod for best results.



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- Turn off all components before making any connections.
- Peripheral equipment and cables sold separately unless otherwise indicated.
- To connect equipment, refer to the appropriate operating instructions.

4 Start performing auto speaker setup.

a) Press and hold AUTO SETUP .

- [AUTO SPEAKER SETUP] indicator starts flashing.

AUTO SPEAKER SETUP ➡ AUTO SPEAKER SETUP

- ***"AUTO SETUP"*** appears on the display.

b) The unit checks that you have correctly connected the calibration microphone.

c) The automatic setup starts with STEP 1, STEP 2, and STEP 3 calibration as follows.
STEP 1 (DETECTION/DISTANCE) → STEP 2 (SIZE/FREQUENCY) → STEP 3 (LEVEL)

For your reference

- Loud test tones are output from each speaker during the configuration.
- During setup, operations may stop when there is an error message on the display. Refer below for troubleshooting.

5 Auto speaker setup finishes.

- ***"COMPLETE"*** appears on the display and all calibrations are saved.
- [AUTO SPEAKER SETUP] indicator lights.
- To exit, press and hold AUTO SETUP .
- Disconnect the calibration microphone.

To cancel during setup

Press any button on the main unit or remote control. ***"CANCELED"*** appears on the display.

Note

Perform auto speaker setup again if you have changed the speakers, speaker positions, or the layout of your listening environment.

Depending on the speakers, room environment, and speaker placement, you may get different results for lowpass filter frequency and other items even when you are using the same speakers. The results are based on small speaker configuration.
(The calibration will give optimal result for "Distance". Therefore, you are not able to check the setting in page 13 while auto speaker setup is in use.)

Troubleshooting for auto speaker setup

While performing auto speaker setup, errors may occur and the messages will blink or scroll on the display, depending on the conditions. Press any button on the main unit or remote control to stop the setup.

After troubleshooting, press and hold AUTO SETUP to start the setup process again.

Message	Solutions	Pages
"INSERT MIC"	• Calibration microphone is not detected. Insert the microphone correctly.	11
"CHECK CONNECTION TO LS/RS SPEAKERS"	• One or both surround speakers not detected. Check the connections.	6
"CHECK CONNECTION TO L/R SPEAKERS"	• Check the front (L) and (R) connections.	6

Note

- Auto speaker setup may produce an unsatisfactory result with some speaker setups and configurations.
- Auto speaker setup will not start if you have muted the speakers. Turn the muting off (➡ page 20).
- Auto speaker setup will not start if you have plugged in headphone. Unplug any headphone.
- VIERA Link "HDAVI Control™" (➡ page 8) is disabled during auto speaker setup.

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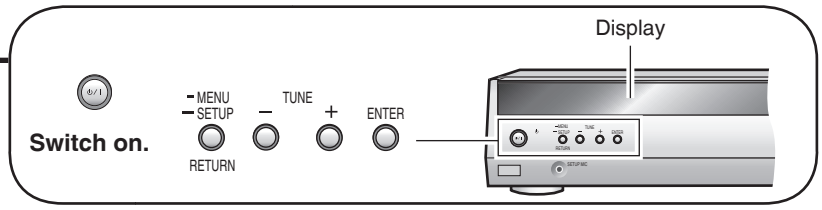
Settings

Change the settings to suit your equipment to the environment in which you are using it. Before making any changes, read the descriptions of the settings, note the factory settings and ranges, and refer to the equipment's instructions.



1 Enter the setup mode.

MENU / SETUP / RETURN

Press and hold.

2 Select the item you want to change.

TUNE – / + → ENTER

2a Select and press [ENTER].

DISTANCE ↔ AUTO SETUP ↔ INPUT MODE ↔ HDMI ↔ DRCOMP ↔ ATTENUATOR ↔ REMOTE ↔ TV DELAY ↔ RESET ↔ EXIT

- Refer to pages 13 and 14 for each item settings.
- For "REMOTE", refer to page 22.
- For "RESET", refer to page 20.

2b Select and press [ENTER].

3 Change the setting.

TUNE – / +

Press to change the setting.

ENTER

Press once to enter.

4 Exit the setup mode.

MENU / SETUP / RETURN

Press repeatedly until "EXIT" appears.

ENTER

Press [ENTER] to completely exit the setup mode.

Distance

- Enter the distance of the front, center and surround speakers from the seating position.

Change the distance so that the sound from all the speakers (except for the subwoofer) reaches you at the same time.
You can select distances between 1.0 and 10.0 m.

The factory settings are: L, R (front): 3.0 m (meters)
C (center): 3.0 m (meters)
SL, SR (surround): 1.5 m (meters)

Auto setup

- Reset the settings done in auto speaker setup.

YES: Reset all auto speaker setup settings
NO: To cancel (factory setting)

Input mode

- This unit automatically detects whether input is digital or analog, but you can fix the input mode.

AUTO: The unit automatically detects whether input is digital or analog.
ANALOG: Select to make the unit accept analog input.
DIG: Select to make the unit accept digital input.
PCMFIX[1]: Select to input to PCM.

2a	2b	3
DISTANCE	L	1.0m to 10.0m
	R	
	C	
	SL	
	SR	
Repeat for each speaker channel		
AUTO SETUP	DEFAULT	NO YES
INPUT MODE	TV	AUTO ANALOG DIG PCMFIX
	DVR	
	DVD	

[1] In rare cases, the unit may have trouble recognizing PCM signals and this may cause the beginnings of tracks to be cut off. Select "PCMFIX" if this occurs.

- With DTS, the signals may not be recognized at all. Engage the DTS FIX mode if this occurs.
  To engage the DTSFIX mode:
  Press and hold [-MENU] and [ENTER] at the same time. "DTS" lights.
  To cancel the DTS FIX mode:
  Press and hold [-MENU] and [ENTER] at the same time.
  The mode cancels when input mode is set to AUTO or when the unit is turned off.

Note

When a FIX mode is on, the unit cannot process other signals. This may cause noise to be output. If this occurs, select an input mode other than PCMFIX, or cancel the DTSFIX mode.

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(continue on next page)

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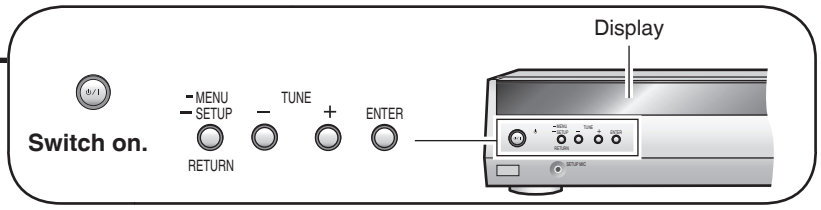


HDMI settings

- To reduce standby power consumption.
- Choice for turning off the VIERA Link "HDAVI Control™" (➡ page 8).

Standby selection

OFF: Standby power consumption reduced (approximately 0.35 W).

- Signals from DVD equipment cannot pass through HDMI connection to the television when the unit is in standby (➡ page 8).
- VIERA Link "HDAVI Control" (➡ page 8) does not work when the unit is in standby.

ON: Normal standby power consumption (factory setting)

VIERA Link "HDAVI Control"

OFF: VIERA Link "HDAVI Control" is OFF

ON: VIERA Link "HDAVI Control" is ON (factory setting)

DRCOMP

(Dynamic range compression)

- Change this setting to listen to software recorded with Dolby Digital at low volume (such as late at night) and maintain audio clarity. It reduces the peak level in loud scenes without affecting the sound field.

OFF: The software is played with the original dynamic range (factory setting).
STANDARD: The level recommended by the producer of the software for household viewing.
MAX: The maximum allowable compression (recommended for night viewing).

Attenuator

(A/D Attenuator)

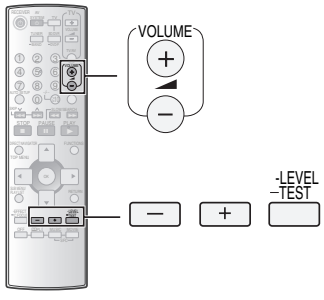
- Turn the A/D attenuator on if "OVERFLOW" lights frequently when using 2-channel analog input.

TV delay

- Delay audio if there appears to be a difference in timing between audio and pictures.

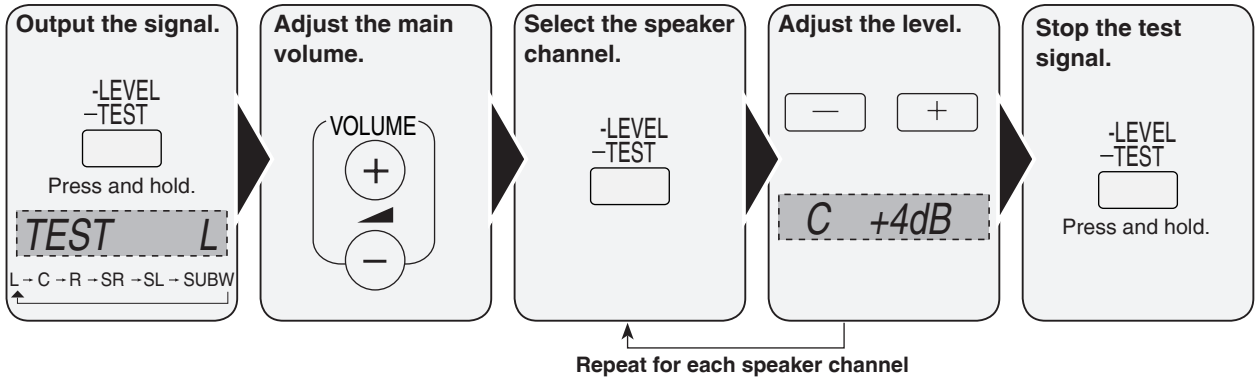
❷a	❷b	❸
HDMI	STNBY	OFF
	CTRL	ON
DRCOMP	OFF	
	STANDARD	
	MAX	
ATTENUATOR	OFF	
	ON	
TV DELAY	OFF	
	ON	

Adjusting speaker output level



C (center), SR (surround right) and SL (surround left) can be adjusted between -10 dB and +10 dB, with 0 dB being the level of the front speakers. Adjust center and surround output to the same apparent level of the front speakers.

For SUBW (subwoofer), you can select "SUBW OFF" so there is no output, "SUBW MIN" for minimum output, a level between 1 and 19, or "SUBW MAX" for maximum output. Adjust subwoofer output so it is balanced with the front speakers.



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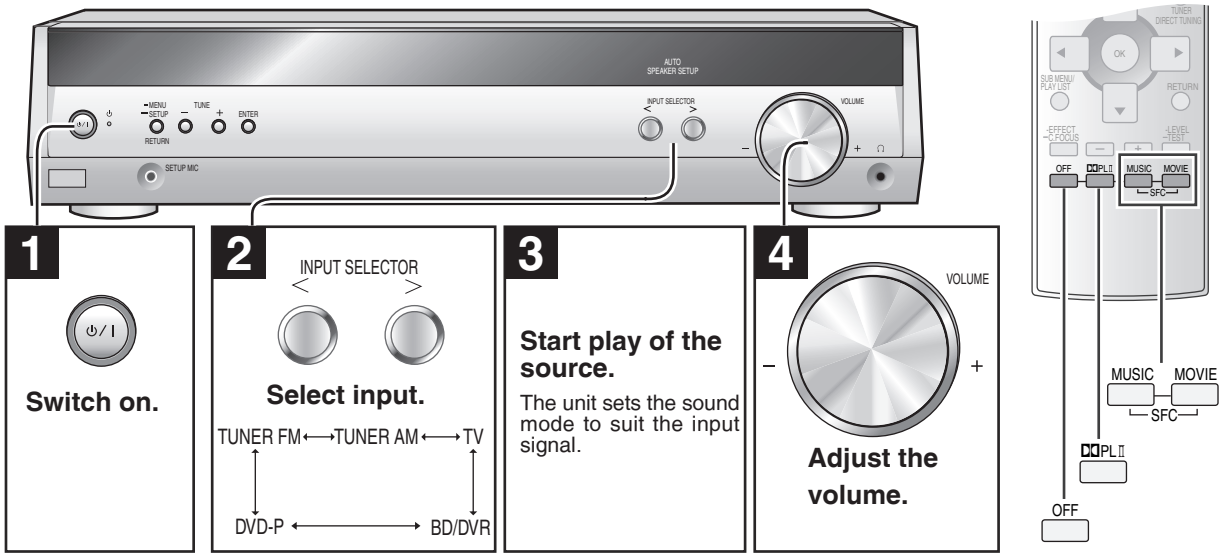

Adding surround effects to stereo sources

Using Dolby Pro Logic II

Dolby Pro Logic II processor works not only on sources recorded with Dolby Surround, but also on any stereo source.

Press PLⅡ to select a mode from the table at right.

- **To cancel, press [OFF].**

You can make fine surround settings when in the MUSIC or PANORAMA mode. (➡ page 19)

PLⅡ	**MOVIE** Use this mode when playing movie software recorded in Dolby Surround.
	MUSIC Adds surround effects to stereo sources.
	PANORAMA Sound is spread out more so you feel like you are surrounded by music.

Using the Sound Field Control (SFC)

Enjoy an enhanced sound experience with greater presence and spread by using these SFC modes with PCM or analogue stereo sources.

Press MUSIC MOVIE SFC to select a mode from the tables at right.

- **To cancel, press [OFF].**

You can change the speaker level of SFC. (➡ page 19)

MUSIC	**LIVE** Brings you up close for “live” stage performance and smoother vocals.
	POP/ROCK For pop, rock, and other music that has a punch to it.
	VOCAL For adding gloss to vocals.
	JAZZ Conveys the exciting and intimate atmosphere of a jazz club.
	DANCE For dance music and other sounds with a strong beat.
	PARTY This mode uses the front and surround speakers so that sound is in stereo regardless of the direction you are facing.

MOVIE	**DRAMA** For dramas and other material where dialog is important.
	ACTION For action movies and other material where impact is important.
	SPORTS To make you feel like you were in the stadium.
	MUSICAL For musicals and other material where music is important.
	GAME Enjoy gaming with more impact.
	MONO For monaural sound.

Note

- Dolby Pro Logic II and SFC modes remain in effect until you turn the mode off.
- When input is PCM with sampling frequencies of 96 kHz or 88.2 kHz, you cannot add surround effects with Dolby Pro Logic II or SFC.
- When input is Dolby Digital or DTS, you cannot use SFC.

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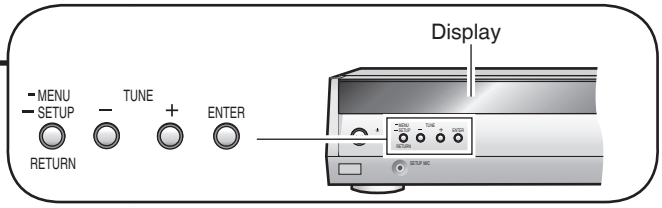
MENU operation

This is an outline of the operations you can perform with the MENU.



1 Press [-MENU] once.

2 Main menu	3 Sub menu 1	4 Sub menu 2	5 Exit
TUNE – / + → ENTER	TUNE – / + → ENTER	TUNE – / + → ENTER	– MENU / – SETUP / RETURN → ENTER
TUNER The radio ➡ page 17	FM MODE (TUNER FM only)	AUTO MONO	Press repeatedly until "EXIT" appears. EXIT Press [ENTER] to completely exit the menu mode.
	MEMORY	MEMO CH 1 MEMO CH30	
	AUTO MEMO	CANCEL START	
	TUNE MODE	MANUAL PRESET	
	RDS DISP (TUNER AM only)	FREQUENCY PS DISP PTY DISP	
	AM STEP (TUNER FM only)	AM STEP 9kHz AM STEP 10kHz	
	BEAT PROOF (TUNER AM only)	MODE 1 MODE 2	
BASS 0 Adjust the bass ➡ page 19	BASS -6 BASS +6		
TREBLE 0 Adjust the treble ➡ page 19	TREBLE -6 TREBLE +6		
BALANCE You can adjust the balance of the front speakers ➡ page 19	L ▽ R		Press repeatedly until "EXIT" appears. EXIT Press [ENTER] to completely exit the menu mode.
DIMMER OFF Dim the display for better viewing in a darkened room ➡ page 20	DIMMER OFF DIMMER 1 DIMMER 2 DIMMER 3		
SLEEP OFF The SLEEP timer can turn the unit off after a set time ➡ page 20	SLEEP OFF SLEEP 30 SLEEP 60 SLEEP 90 SLEEP 120		

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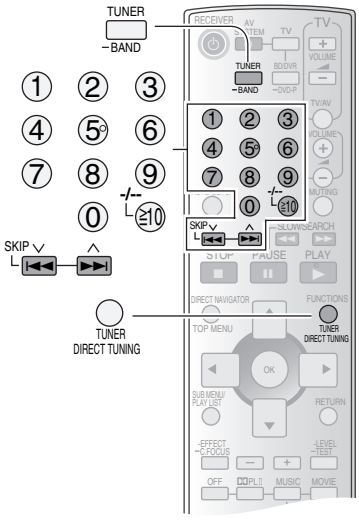
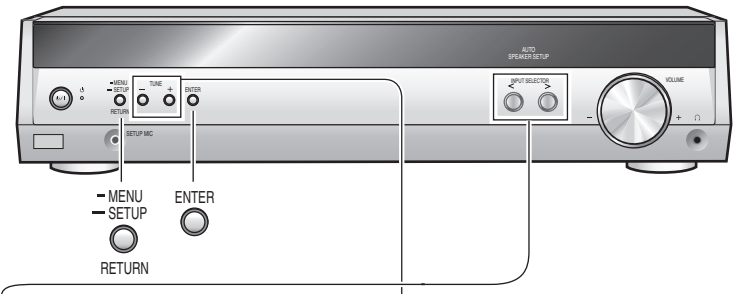
The radio





1 INPUT SELECTOR < >

Press [INPUT SELECTOR < or >] to select "TUNER FM" or "TUNER AM".

2 TUNE – +

Select the frequency.

Auto tuning starts if you press and hold the button.

Direct tuning

Input the frequency of the station.

Remote control

1. **Press [TUNER, –BAND] to select "TUNER".**
2. **Press and hold [TUNER, –BAND] to select "TUNER FM" or "TUNER AM".**
3. **Press [TUNER DIRECT TUNING].**
4. **Press the numbered buttons to enter the frequency.**

e.g. To select 107.90 MHz, press [1] → [0] → [7] → [9] → [0]

- If you do not press a button while the cursor is flashing, the display returns to the frequency being received.
- If the frequency has not been input correctly, "ERROR" will be displayed.

Automatic presetting

The FM stations the unit can receive are preset in channels 1 to 30. The AM stations the unit can receive are preset in channels 21 to 30 (FM stations are replaced if any were preset in these channels).

Preparation: Tune to either FM 87.50 MHz or AM 522 kHz.

Main unit

1. **Press [-MENU] to select "TUNER" ➡ "AUTO MEMO".**
2. **Press [TUNE - or +] to select "START" ➡ [ENTER].**
   Select "CANCEL" to cancel.

The tuner presets all the stations it can receive into the channels in ascending order.

During automatic presetting, the memory indicator (M) flashes and the frequency scrolls. The memory indicator and channel numbers are displayed for a second when a station is preset.
The last station to be preset is displayed when presetting finishes.

Manual presetting

Preset the stations one at a time.

Preparation: Tune to the station you want to preset.

Main unit

1. **Press [-MENU] to select "TUNER" ➡ "MEMORY".**
2. **Press [TUNE - or +] to select the channel ➡ [ENTER].**

("STORED" lights.)

For your reference

FM stations can also be preset in the MONO mode.

Selecting channels

Remote control

1. **Press [TUNER, –BAND] to select "TUNER".**
2. **Press [SKIP ∨ or ∧].**

or

Press the numbered buttons.

For channels 1 to 9, press the corresponding number.
For channels 10 or over, press [≧10, -/--], then the two digits.
e.g. To select channel 21: [≧10, -/--] → [2] → [1]

Main unit

1. **Press [-MENU] to select "TUNER" ➡ "TUNE MODE".**
2. **Press [TUNE - or +] to select "PRESET" ➡ [ENTER].**
   Select "MANUAL" to cancel.
3. **After exiting the menu:**
   Press [TUNE - or +].

To change the AM frequency step

If you cannot tune to the correct AM frequency, change the frequency step to suit your area.

Main unit

1. Press [-MENU] to select "TUNER" ➡ "AM STEP".
2. Press [TUNE - or +] to select "AM STEP 9 kHz" or "AM STEP 10 kHz" ➡ [ENTER].

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RDS broadcasts

This unit can display the text data transmitted by the radio data system (RDS) available in some areas.
"RDS" lights while RDS signals are being received.
RDS displays may not be available if reception is poor.

Main unit

1. **Press [-MENU] to select "TUNER" ➡ "RDS DISP".**
2. **Press [TUNE - or +] to select "FREQUENCY", "PS DISP" or "PTY DISP" ➡ [ENTER].**

FREQUENCY: Frequency display
PS DISP: Program service, the station name (factory setting)
PTY DISP: Program type

Note

This unit does not have the emergency broadcast system (EBS) that tunes automatically into emergency broadcasts.

PTY Display

NEWS	News	FINANCE	Finance
AFFAIRS	Current affairs	CHILDREN	Children
INFO	Information	SOCIAL A	Social affairs
SPORT	Sport	RELIGION	Religion
EDUCATE	Education	PHONE IN	Phone in
DRAMA	Drama	TRAVEL	Travel
CULTURE	Culture	LEISURE	Leisure
SCIENCE	Science	JAZZ	Jazz music
VARIED	Varied	COUNTRY	Country music
POP M	Pop music	NATIONAL	National music
ROCK M	Rock music	OLDIES	Oldies
M-O-R- M	Middle-of-the-road Music	FOLK M	Folk music
LIGHT M	Light classical	DOCUMENT	Documentary
CLASSICS	Serious classical	TEST	Test broadcast
OTHER M	Other music	ALARM	Emergency announcement
WEATHER	Weather information		

Reducing excessive noise

■ During FM stereo reception

You can improve FM reception by switching reception to monaural.

Main unit

1. **Press [-MENU] to select "TUNER" ➡ "FM MODE".**
2. **Press [TUNE - or +] to select "MONO" ➡ [ENTER].**
   Select "AUTO" to cancel.

■ During AM reception

When there is a lot of noise interference with an AM broadcast, try switching this mode.

Main unit

1. **Press [-MENU] to select "TUNER" ➡ "BEAT PROOF".**
2. **Press [TUNE - or +] to select "MODE 1" or "MODE 2" ➡ [ENTER].**

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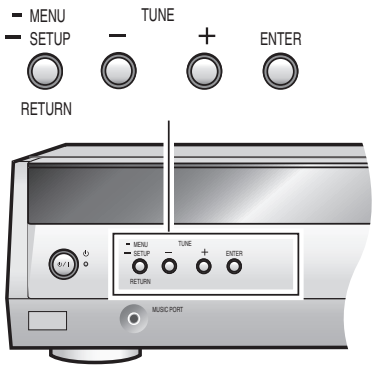

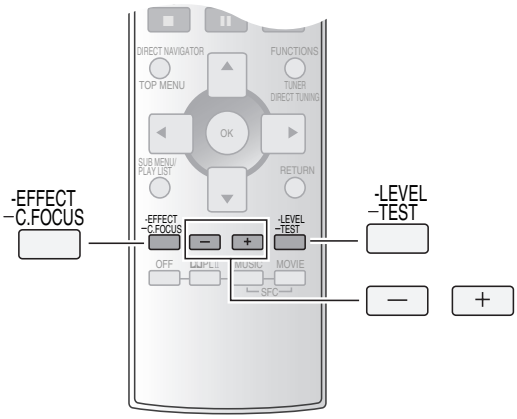

Adjusting the tone

You can adjust the level of the bass and treble.

Main unit

1. **Use the menus to select “BASS” or “TREBLE”.**
   ➡ MENU operation on page 16.
2. **Press [-] or [+] to adjust the tone.**

Input signals must be either analog or PCM, and Dolby Pro Logic II and SFC must be off (➡ page 15).

Dimension Control “DIMEN”

You can adjust the effect of the Dolby Pro Logic II MUSIC and PANORAMA modes (➡ page 15).

You can make up for differences in the output level of the front and surround speakers.
You can choose a level between -3 and +3: Increase the level to move sound to the front speakers, decrease to move it to the surround speakers.
The factory setting is 0.

Remote control

1. **Press [-EFFECT, –C.FOCUS] to select “DIMEN”.**
2. **Press [-] or [+] to adjust the effect.**

Center Width Control “C-WDTH”

You can adjust the effect of the Dolby Pro Logic II MUSIC and PANORAMA modes (➡ page 15).

This adjustment helps you realize a more natural sound image when listening to music. Move sound out into the front speakers to improve the overall front image, or add sound to the center speaker to fix the center image.
You can choose a level between 0 (the center speaker is dominant) and 7 (center sound is spread out).
The factory setting is 3.

Remote control

1. **Press [-EFFECT, –C.FOCUS] to select “C-WDTH”.**
2. **Press [-] or [+] to adjust the effect.**

Balance

You can adjust the balance of the front speakers.

Main unit

1. **Use the menus to select “BALANCE”.**
   ➡ MENU operation on page 16.
2. **Press [-] or [+] to adjust the balance.**

Center focus

Use with discs where the dialogue is recorded in the center channel.
You can make the sound of the center speaker seem like it is coming from within the television.

Remote control

Press and hold [-EFFECT, –C.FOCUS].
“C.FOCUS” lights.
The factory setting is off.

You cannot use this when the sound mode is STEREO.

Adjusting SFC

You can adjust the sound field by adjusting the level of the speakers. This adjustment can be made for each SFC mode (➡ page 15).

Remote control

1. **Press [-LEVEL, –TEST] to select the speaker channel.**
   Each time you press the button:
   C → SR → SL → SUBW
   ↑ ↓
2. **Press [-] or [+] to adjust the level.**
   C, SR, and SL: -10 dB to +10 dB
   SUBW: OFF ↔ MIN ↔ 1 - 19 ↔ MAX

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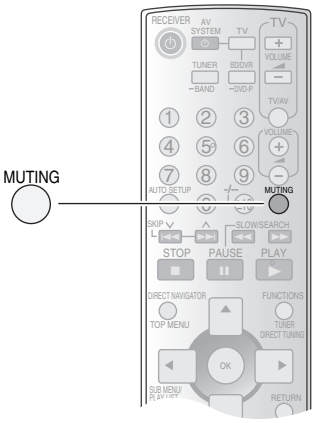
Other functions



Sleep timer

The SLEEP timer can turn the unit off after a set time.
It does not control any other components.

Main unit

1. **Use the menus to select "SLEEP".**
   ➡ MENU operation on page 16.
2. **Press [-] or [+] to select the time (in minutes).**
   The display changes as follows:
   SLEEP OFF ↔ SLEEP 30 ↔ SLEEP 60 ↔ SLEEP 90 ↔ SLEEP 120

To check the setting

1. Press [-MENU] to enter the main menu.
2. Press [TUNE - or +] to select "SLEEP".
The time remaining appears.

To change the setting

Repeat the procedure from the beginning.

Muting

Remote control

Press [MUTING].

To cancel
Press [MUTING] again.
Muting also cancels when you adjust the volume or switch the unit to standby.

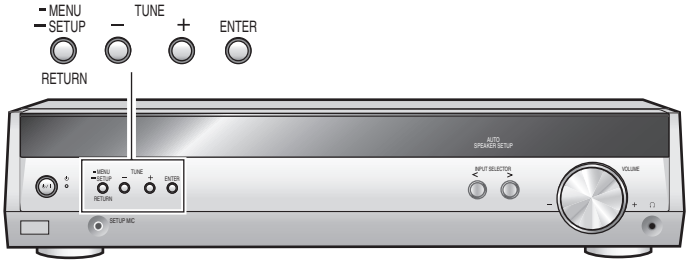
Dimmer

Dim the display for better viewing in a darkened room.

Main unit

1. **Use the menus to select "DIMMER".**
   ➡ MENU operation on page 16.
2. **Press [-] or [+] to select the level (1, 2, or 3) or OFF.**

The RESET function



The operation settings for the unit will be initialized to the settings made at the time of shipment.
However, any preset radio stations will not be erased.

1. **Press and hold [–SETUP] to enter the setup menu.**
2. **Press [TUNE - or +] to select "RESET" ➡ [ENTER].**
3. **Press [TUNE - or +] to select "RESET YES" ➡ [ENTER].**
   To cancel, select "RESET NO".

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Remote control operation guide

This remote control can operate Panasonic DVD recorders, DVD players, and televisions.
Note that this remote control cannot operate some equipment and that it may not be able to perform some operations.

Before using a Panasonic DVD recorder or player

DVD recorder

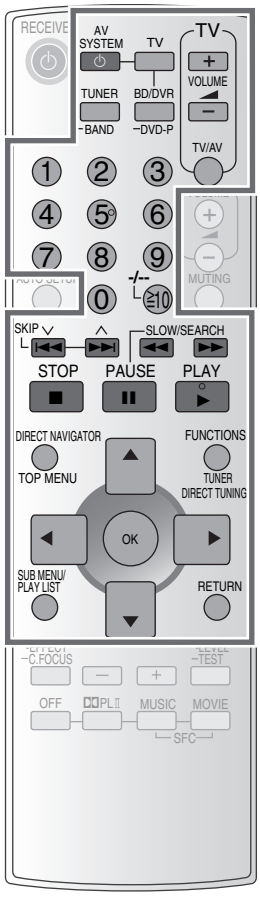
Change the remote control code to match the remote control mode of the DVD recorder.

1. Check the remote control mode of the DVD recorder.
2. For about one second hold down both [OK] and the numbered button ([1], [2] or [3]) (the same as the remote control mode of the DVD recorder).

The factory setting is [1].

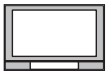
DVD player

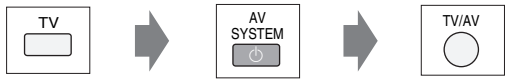
Change the remote control code so you can operate a DVD player.
For about one second hold down both [OK] and [4].



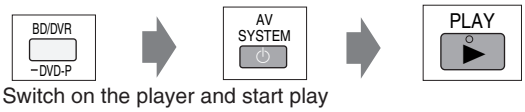
Watching DVDs/TV

Switch on



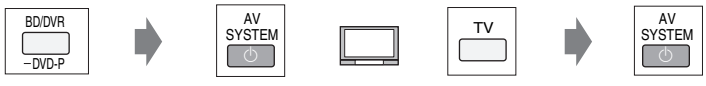


Switch on the television and select input

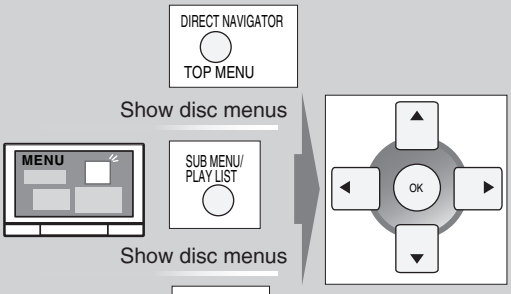


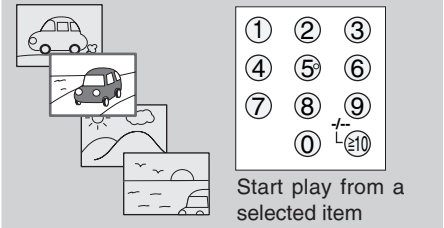
Switch on the player and start play

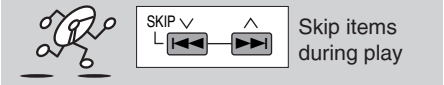
Switch off

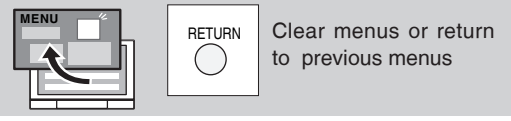


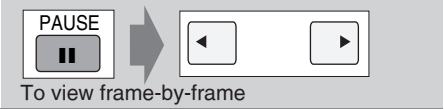
Operating the DVD recorder/DVD player



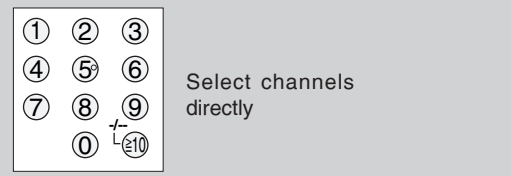


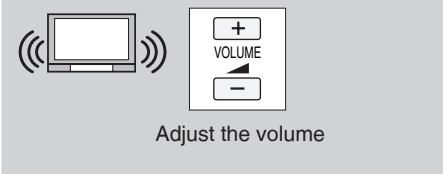






Operating the TV





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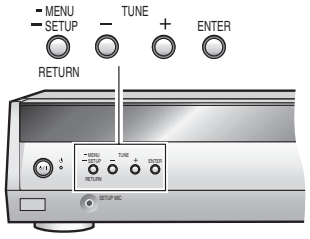
Remote control operation guide

Changing the remote control code

Change the code if you find the remote control unintentionally also controls other Panasonic equipment. Do the following to set the remote control code and this unit's remote control mode to the same one.



Change the main unit's mode

1. **Enter the SETUP menu.**

   Press and hold MENU/SETUP (RETURN).

2. **Select and press [ENTER].**

3. **Select and press [ENTER].**

4. **Press [-MENU, –SETUP, RETURN] repeatedly to select "EXIT" and press [ENTER].**

Change the remote control's code

5. **Press** TUNER/BAND.

6. **While pressing** OK **, press and hold** 2 **for about 2 seconds.**

To restore the code to "1"
- On the main unit: In step 3, select **"1"**.
- On the remote control: In step 6, while pressing [OK], press and hold [1] for about 2 seconds.

Specifications (DIN 45 500)

■ AMPLIFIER SECTION

RMS output power of each channel driven
10 % total harmonic distortion

1 kHz front CH	125 W per channel (3 Ω)
1 kHz surround CH	125 W per channel (3 Ω)
1 kHz center CH	250 W per channel (6 Ω)
100 Hz subwoofer CH	250 W per channel (6 Ω)
Total RMS output power	1000 W

Rated minimum sine wave RMS power output
1% total harmonic distortion (Dolby Digital mode)

1kHz front CH	75 W per channel (3 Ω)
1kHz surround CH	75 W per channel (3 Ω)
1kHz center CH	150 W per channel (6 Ω)
100 Hz subwoofer CH	150 W per channel (6 Ω)
Total RMS output power	600 W
Total harmonic distortion	
Half power at 1 kHz (Front CH)	0.5 % (3 Ω)
Input sensitivity	
DVD-P, TV, BD/DVR	450 mV, IHF'66
S/N at rated power (3 Ω)	
DVD-P, TV, BD/DVR	80 dB (85 dB, IHF'66)
Input impedance	
DVD-P, TV, BD/DVR	47 kΩ
Tone controls	
BASS	50 Hz, +6 to -6 dB
TREBLE	20 kHz, +6 to -6 dB

Digital input	**OPTICAL**	2
	COAXIAL	1
	HDMI Input	2
	HDMI Output	1

Wireless Ready	SH-FX65GN-K

■ FM TUNER SECTION

Frequency range	87.50 MHz to 108.00 MHz
Sensitivity	
S/N 30 dB	1.9 μV/75 Ω
S/N 26 dB	1.8 μV/75 Ω
S/N 20 dB	1.6 μV/75 Ω
IHF usable sensitivity	(IHF '58) 2.2 μV/75 Ω
IHF 46 dB stereo quieting sensitivity	22 μV/75 Ω
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	60 dB (71 dB, IHF)
STEREO	58 dB (65 dB, IHF)
Frequency response	20 Hz to 15 kHz, +1 dB, -2 dB
Image rejection at 98 MHz	40 dB
IF rejection at 98 MHz	70 dB
Stereo separation (1 kHz)	40 dB
Antenna terminal	75 Ω (unbalanced)

■ AM TUNER SECTION

Frequency range	522 kHz to 1611 kHz (9 kHz steps) 530 kHz to 1620 kHz (10 kHz steps)
Sensitivity	500 μV/m
Selectivity (at 999 kHz)	30 dB

■ SPEAKER SECTION

Front speaker (SB-HF550)

Type	1 Way, 1 Speaker
Speaker unit	
Full range	6.5 cm cone type
Input power (IEC)	125 W (Max/3 Ω)
Output sound pressure level	80 dB/W (1.0 m)
Frequency range	76 Hz to 25 kHz (-16 dB) 89 Hz to 22 kHz (-10 dB)
Dimensions (W x H x D)	252 mm x 1123 mm x 235 mm
Mass	3.7 kg

Surround speaker (SB-HS550)

Type	1 Way, 1 Speaker
Speaker unit	
Full range	6.5 cm cone type
Input power (IEC)	125 W (Max/3 Ω)
Output sound pressure level	80 dB/W (1.0 m)
Frequency range	95 Hz to 25 kHz (-16 dB) 120 Hz to 22 kHz (-10 dB)
Dimensions (W x H x D)	92 mm x 142 mm x 95 mm
Mass	0.6 kg

Center speaker (SB-HC550)

Type	2 Way, 2 Speakers
Speaker unit	
Full range	6.5 cm cone type x 2
Input power (IEC)	250 W (Max/6 Ω)
Output sound pressure level	82 dB/W (1.0 m)
Crossover frequency	5 kHz
Frequency range	80 Hz to 25 kHz (-16 dB) 96 Hz to 22 kHz (-10 dB)
Dimensions (W x H x D)	270 mm x 94 mm x 95 mm
Mass	1.3 kg

Subwoofer (SB-HW550)

Type	1 Way, 1 Speaker
Speaker unit (Woofer)	16 cm cone type
Output sound pressure level	81 dB/W (1.0 m)
Frequency range	31 Hz to 220 Hz (-16 dB) 37 Hz to 180 Hz (-10 dB)
Dimensions (W x H x D)	153 mm x 415 mm x 257 mm
Mass	3.6 kg

■ GENERAL

Power supply	AC 230 V to 240 V, 50 Hz
Power consumption	135 W
Dimensions (W x H x D)	430 mm x 105 mm x 388 mm
Mass	4.1 kg

Power consumption in standby mode:	**1 W**

Notes:
1. Specifications are subject to change without notice.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

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Troubleshooting guide

Before requesting service, make the below checks.
If you can't fix the unit as described or if something not listed here occurs, contact your dealer.

■ Common problems		Page
No power.	• Ensure the AC mains lead is connected.	10
No sound.	• Turn the volume up. • Check connections to speakers and other equipment. • Select the correct source. • Check that the digital signals can be decoded by this unit. • Turn PCMFIX and DTSFIX off. • An electrostatic discharge (ESD) may interrupt sound. Turn the unit off and on again.	15 5-10 15 9 13 –
Display is dim.	• Check the DIMMER level. • An electrostatic discharge (ESD) may cause the display to dim. Turn the unit off and on again.	20 –
"OVERLOAD", "F70", or "F76" appears on the display.	• Turn the unit off, disconnect the AC mains lead, and consult your dealer.	–
"FAN LOCK" appears on the display.	• Remove the object obstructing the cooling fan.	–
■ Sound		
Sound is not heard from the center, surround, or subwoofer speakers.	• The source may be stereo. Use Dolby Pro Logic II or SFC.	15
A ticking noise interrupts the sound.	• The speaker wires are touching each other. Check all your speaker connections.	6
Cannot use Dolby Pro Logic II or SFC.	• You cannot use Dolby Pro Logic II or SFC when input is PCM with sampling frequencies of 96 kHz or 88.2 kHz.	15
■ Radio		
The radio cannot be tuned in or there is a lot of noise and interference.	• Connect the appropriate antenna. (You may need an outdoor antenna or one with more elements.) • Adjust the position of the FM or AM antenna. • Reduce the treble. • Turn off nearby televisions, video decks and DVD players. • Separate the antenna from other cables, leads, and appliances. • Try changing the sound mode or turning the modes off.	10 10 19 – – 15
There is a lot of noise when listening to AM.	• Try changing the BEAT PROOF mode.	16, 18
The correct AM frequency cannot be tuned in.	• Change the frequency step.	16, 17
■ HDMI		
When using an HDMI connection, the first few seconds of sound is cut off.	• Should you be playing a chapter on a DVD: – Change the audio output setting on the DVD player or DVD recorder from "Bitstream" to "PCM". (6.1-channel sources will however be played as 5.1-channel.) – Select ***"PCMFIX"*** as instructed in "INPUT MODE" when you play 2-channel sources.	– 13
"U 70-1-1" appears on the display.	• The equipment connected by the HDMI cable is not compatible with the unit's copyright protection technology.	–
"U 70-1-2" appears on the display.	• The unit has received a signal for a picture format that is incompatible with the HDMI connection. Check the settings of the connected equipment.	–
"U 70-3" appears on the display.	• Should anything unusual happen using an HDMI connection: Consult your dealer if the sign remains on the display after these steps. – Turn the connected equipment off and on again. – Pull out the HDMI cable then reinsert it. – Reduce the amount of equipment connected in series to the HDMI terminal if exceeding 2 units.	– 8 –
The unit does not work properly.	• The unit does not work properly when wrong cords are in HDMI input and output terminals. Turn the unit off, unplug the AC mains lead, and make connections again.	8
VIERA Link "HDAVI Control™" does not function properly.	• Connect the unit to your TV (VIERA) using the HDMI cable, switch the TV on, unplug the unit's AC mains lead, and insert it into a household mains socket again.	–
■ Remote control		
The remote control does not work.	• Replace the batteries if they are worn.	3
Other products respond to the remote control.	• Change this unit's remote control code to ***"REMOTE 2"***.	22

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, carefully read the instructions that came with the cloth.

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Safety precautions

Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.
Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.
Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.
Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock.
Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.
Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.
Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these operating instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.
Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

"DTS" and "DTS Digital Surround" are registered trademarks of DTS, Inc.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.

This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE,

- **DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.**
- **USE ONLY THE RECOMMENDED ACCESSORIES.**
- **DO NOT REMOVE THE COVER (OR BACK); THERE ARE NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**

The socket outlet shall be installed near the equipment and easily accessible.
The mains plug of the power supply cord shall remain readily operable.
To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from AC receptacle.

CAUTION!

- **DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**
- **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.**
- **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.**
- **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.**

CAUTION!

Do not place anything on top of this unit or block the heat radiation vents in any way. In particular, do not place tape decks or CD/DVD players on this unit as heat radiated from it can damage your software.

If you see this symbol-

Information on Disposal in other Countries outside the European Union

This symbol is only valid in the European Union.
If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Matsushita Electric Industrial Co., Ltd.
Web Site: http://panasonic.net

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